



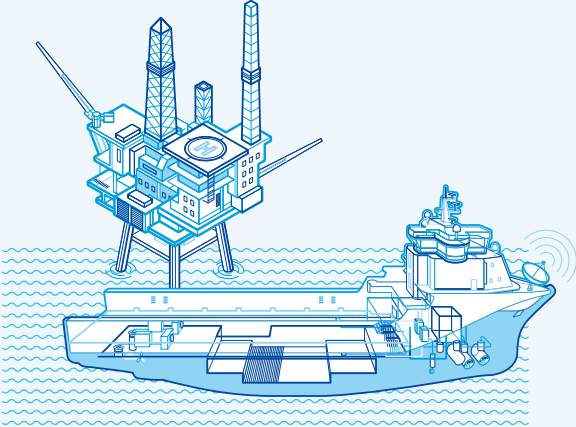
HGN

Air Circuit Breakers

HGN

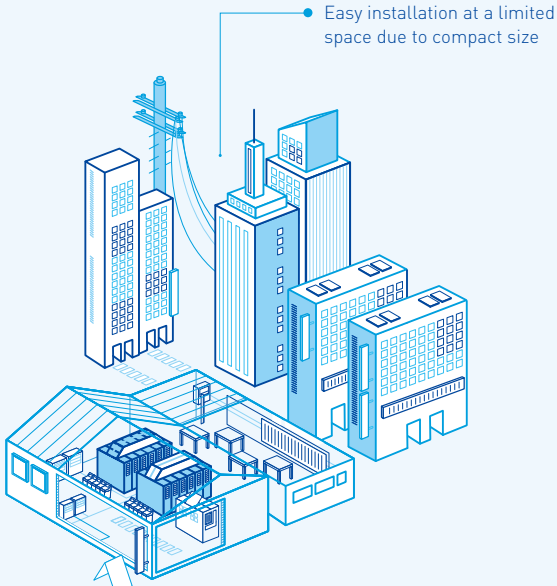
Air Circuit Breakers

Applicable to Various Location



Marine

Approved marine certificate



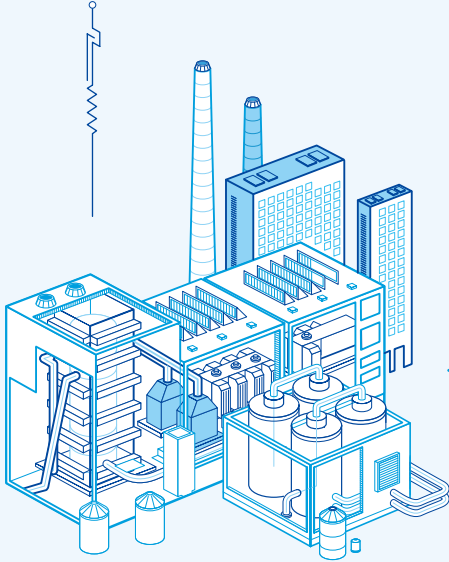
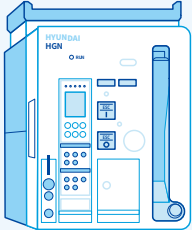
Easy installation at a limited space due to compact size

Building



Residence

Stable protection for electrical power system with enhanced electric monitoring features



Industry

IEC 60947-1, 2 certified for industrial installation

Product Features

In accordance with the changing trend, HG Series ACB is equipped with various accessories and advanced level of digital protection relay.

In addition, maximized customer's range of selection and level of satisfaction with model dualization and compact size.



Type per Rating

- HGN
Frame 2 Type
- 2,000/4,000 A



Outstanding Breaking Capacity

- Maximum Breaking Capacity :
50 kA (at 1,150 V, HGN Q Frame)
- Rated Impulse Withstand Voltage (Uimp) :
12 kV



Multi Busbar

- BUS Bar Terminal can be changed to
horizontal/vertical



Customized Retrofit ACB can be Provided

- New products can be developed to be compatible/
installed according to the distance between
cradle phase/pole/land and terminal size of the
ACB that has been installed previously



Accurate Accident Detection System

- Accident information can be received by smart
phone using NFC android app (information can be
saved up to 10 times)



Overview

Product Type



P Frame [30 kA]
HGN 630 ~ 2,000 A



Q Frame [50 kA]
HGN 630 ~ 4,000 A

Capable of Responding to Various Customer Applications

HG-Series ACB can satisfy needs of various customers by allowing applications on commercial buildings, data center, instruments industries with its high breaking capacity and advanced OCR. With a 100 % capacity design of the N phase for all models, it will also protect facilities safely from abnormality such as harmonic wave.



Building

- Multipurpose Building
- Great Hospital
- Commercial Building
- Hotel



Computer Center

- Broadcasting Station
- Information/Computer Center



Industrial Facility

- Steelworks
- Petrochemistry
- Paper-mill



Power Utility

- Power Plant
- Substation
- Micro Grid
- ESS

Acquired Standards and Certifications

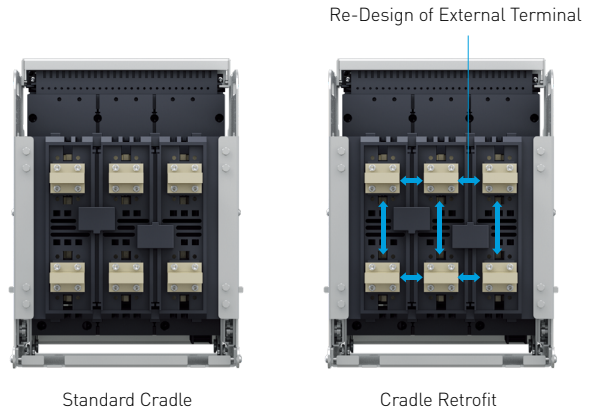
- CB Certification (UL) : IEC 60947-1, 2
- CE Mark



Customized Retrofit ACB

New products can be developed to be compatible/installed according to the distance of cradle phase/pole/land and terminal size of the ACB that has been installed previously

- Economic** No need for busbar and external box replacement, minimum construction period, uninterruptable replacement in case of body retrofit
- Stability** Lifespan can be extended through the latest relay performance and by providing breaking performance of high breaking product
- Compatibility** Stable usage through control terminal bar, bus bar structure and plug-in compatible devices
- Technical Support** Customer satisfaction through inspection of various accessories of old panels



Highly Functional Protection Trip Relay (OCR)

Apart from the basic protection functions, OCR(Over Current Relay(Trip Relay)) has reinforced power monitoring functions such as temperature monitoring, fault recording and storage etc., enabling stable power supply.

Model Name	N Type	A Type	P Type	H Type
Externals				
Main Functions	<ul style="list-style-type: none"> • Overcurrent Protection (L/S/I/G) • World's First NFC Function Applied • Fault Recording (10) and Waveform (4 Cycles, Check Via Communication) can be Transmitted to Mobile Phone App 	<ul style="list-style-type: none"> • Overcurrent Protection (L/S/I/G) • Self Power • Individual Continuous Power Contact • Fault Recording (256) and Waveform (4 Cycles, Check Via Communication) • Communication (MODBUS), External Grounding CT/Earth Leakage ZCT can be used 	<ul style="list-style-type: none"> • Overcurrent Protection (L/S/I/G) • External Power • Individual Continuous Power Contact • Fault Recording (256) and Waveform (4 Cycles, Check Via Communication) • Over-Voltage/Under-Voltage, Power, Power Factor, Energy Display 	<ul style="list-style-type: none"> • L/S/I/G Functions • External Power • Individual Continuous Power Contact • Fault Recording (256) and Waveform (4 Cycles, Check Via Communication) • L/S/I/G Minute Current Adjustment • Voltage/Current Harmonics [1 st ~ 63 th] Analysis • View 3 Phase Waveform

Model Selection Table

Rating and Specification

Model Name		HGN	
Item		P Frame	Q Frame
Ampere Frame	AF	2,000	4,000
		630	630
		800	800
		1,000	1,000
		1,250	1,250
Rated Current [In max]	Based on 40 °C A	1,600	1,600
		2,000	2,000
		-	2,500
		-	3,200
		-	4,000
Rated Operational Voltage [Ue]	V	1,150	
Rated Insulation Voltage [Ui]	V	1,250	
Frequency	Hz	50/60	
No. of Poles	P	3, 4	
Current Setting Range (...× In max)	A	0.4 ~ 1.0	
Rated Current of Neutral Pole (... %×In)	A	100 %	100 %
Rated Breaking Capacity [Icu] [Sym]			
IEC 60947-2 Category "B"	AC 1,150/ 1,000/900 V 800 V	30 kA	50
		-	75
Rated Service Short-Circuit Breaking Capacity [Ics] (... %×Icu)	kA	100 %	100 %
Rated Making Capacity [Icm] (... %×In)	kA	100 %	100 %
Rated Short-Time withstand Current [Icw] (1s)	kA	30	50
Rated Impulse withstand Voltage [Uimp]	kV	12	
Total Breaking-Time	ms	40 ¹⁾	
Closing Operational Time			
Motor Charging Time (sec) max.		10	
Closing time (ms) max.		80	
Lifecycle (Cycles)²⁾			
Mechanical		20,000	15,000
Electrical		5,000	5,000
Weight			
3 Pole	Draw-Out Type	63	87
	Fixed Type	34	44
4 Pole	Draw-Out Type	74	103
	Fixed Type	44	55
Dimensions (W×H×D)			
3 Pole	Draw-Out Type	328×460×368.4	399×460×368.4
	Fixed Type	337.4×404.4×295.8	408.4×404.4×295.8
4 Pole	Draw-Out Type	413×460×368.4	514×460×368.4
	Fixed Type	422.4×404.4×295.8	523.4×404.4×295.8

※ 1) In case of MCR and override setting, INST is 50ms.

2) Life time is the limit lifespan and is not the guaranteed lifespan. In case of maintenance, it is charged. In the event of abnormalities in accessories during use, it can be replaced.

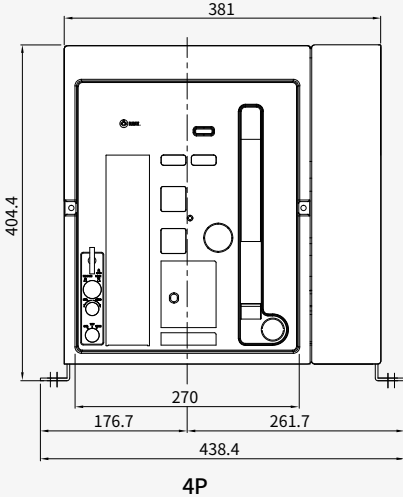
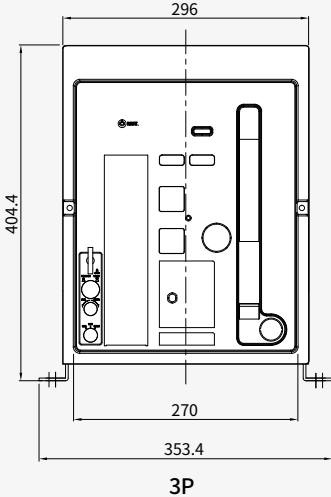
Quality Assurance : Based on IEC 60947-2's number of opening/closing within the warranty period.

Dimensions

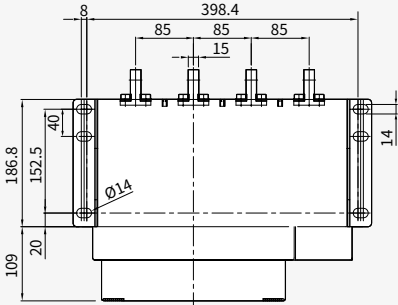
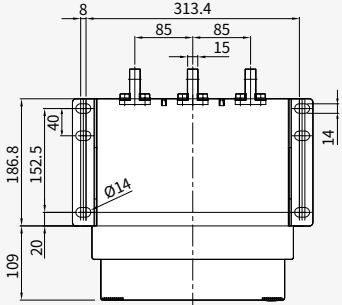
HGN Fixed Type 630 ~ 2,000 A HGN06 ~ 20 P Frame

Front

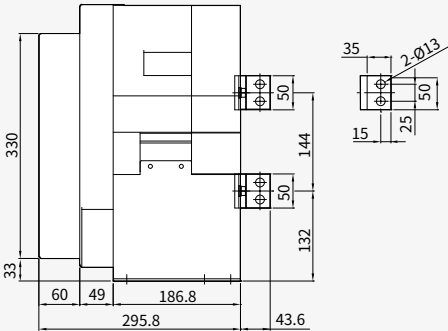
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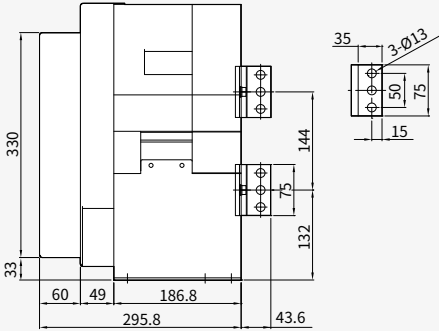
Vertical Type



[HGS/HGN 630 ~ 1,600 A]



[HGN 2,000 A]



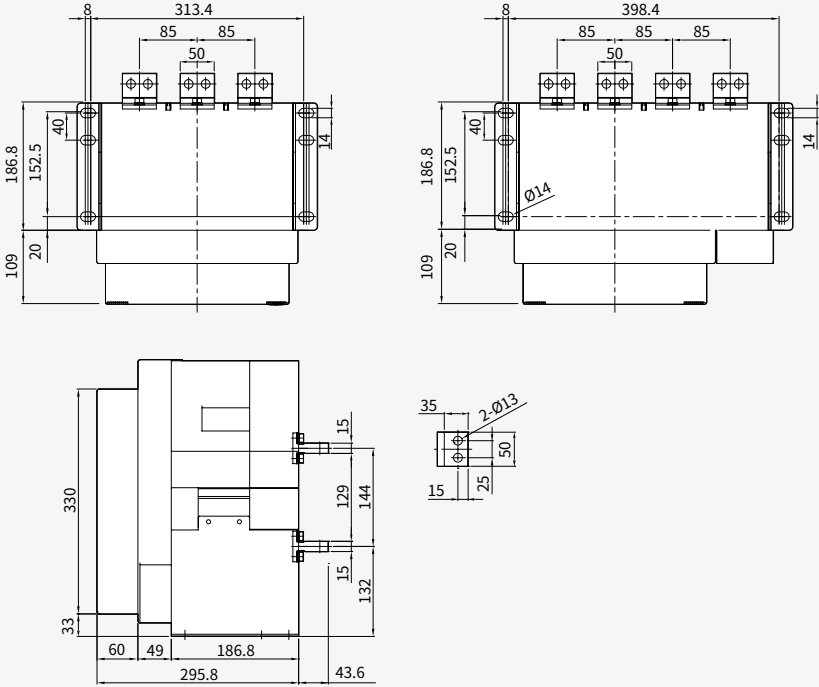
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As for the HGN draw-out type A type 2,000 A, only the vertical terminal can be applicable.

Dimensions

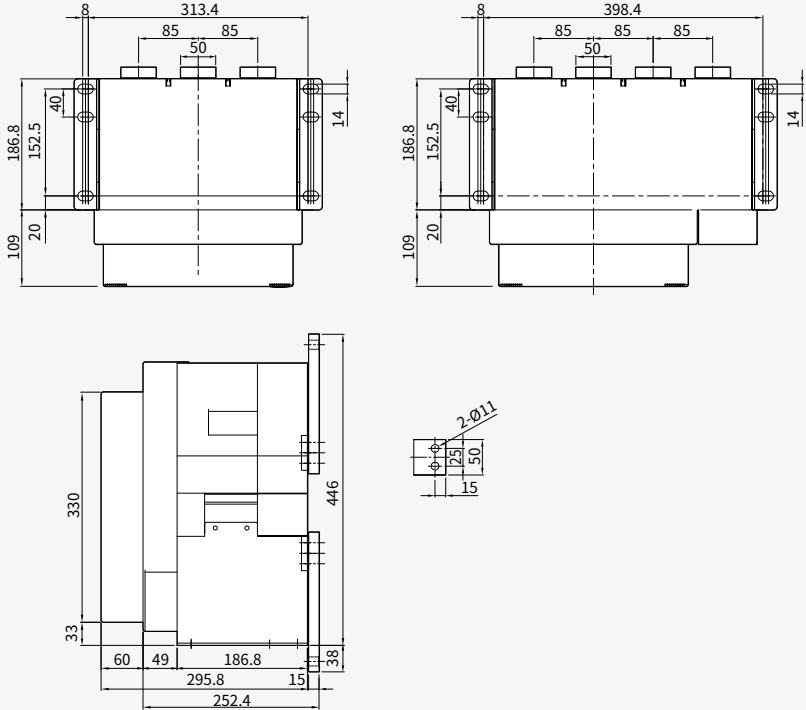
HGN Fixed Type 630 ~ 2,000 A HGN06 ~ 20 P Frame

Horizontal Type (630 ~ 1,600 A)

Unit : mm



Front Type (630 ~ 1,600 A)

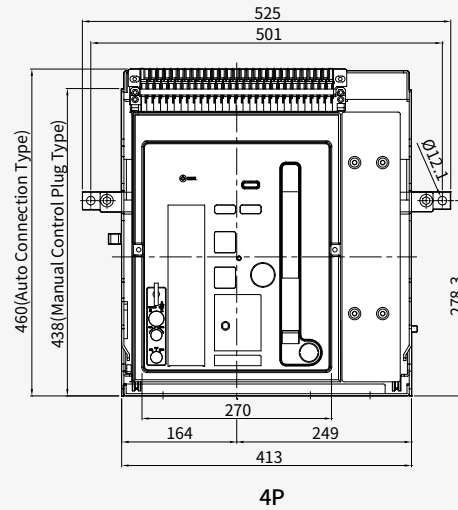
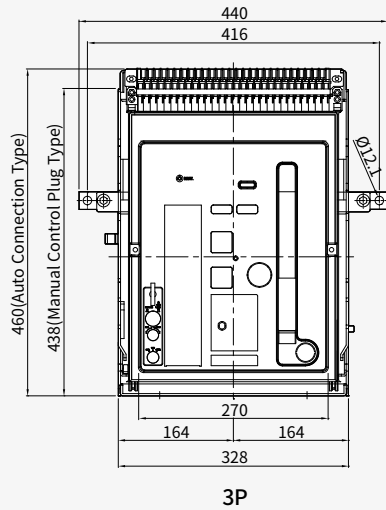


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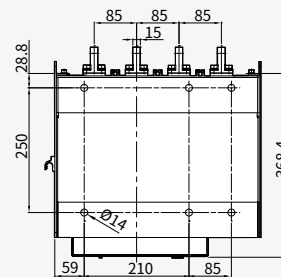
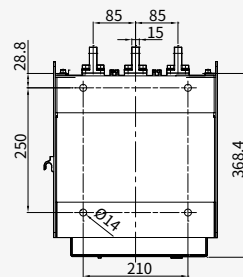
HGN Draw-Out Type 630 ~ 2,000 A HGN06 ~ 20 P Frame

Front

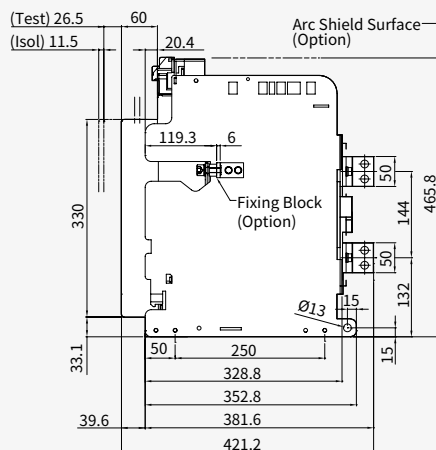
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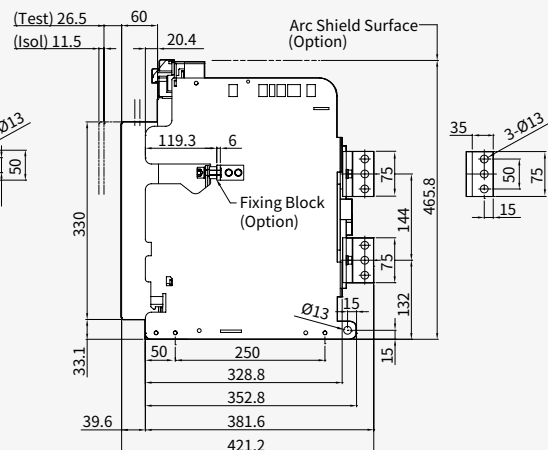
Vertical Type



[HGS/HGN 630 ~ 1,600 A]



[HGN 2,000 A]



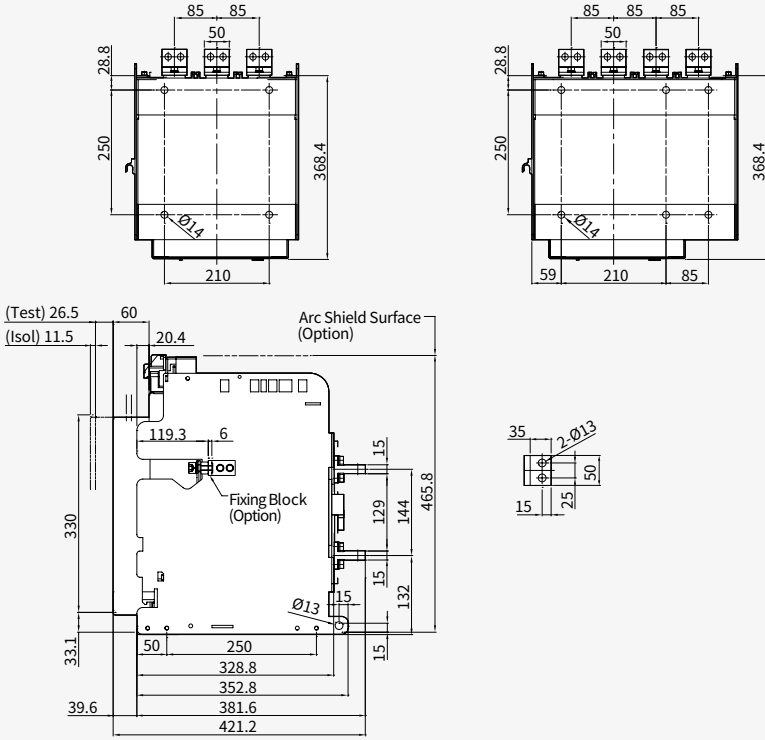
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As for the HGN draw-out type A type 2,000 A, only the vertical terminal can be applicable.

Dimensions

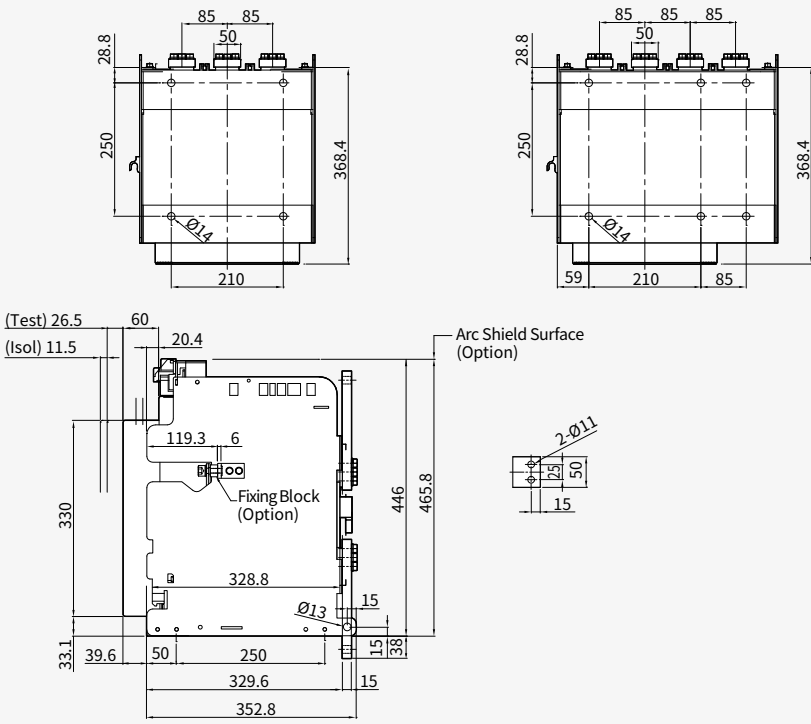
HGN Draw-Out Type 630 ~ 2,000 A HGN06 ~ 20 P Frame

Horizontal Type (630 ~ 1,600 A)

Unit : mm



Front Type (630 ~ 1,600 A)

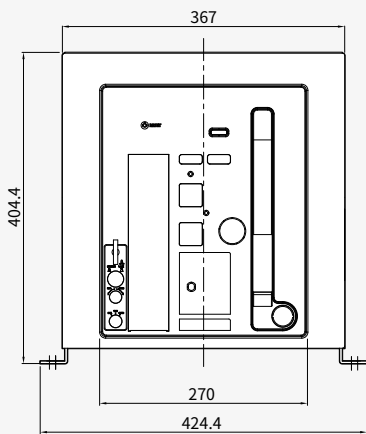


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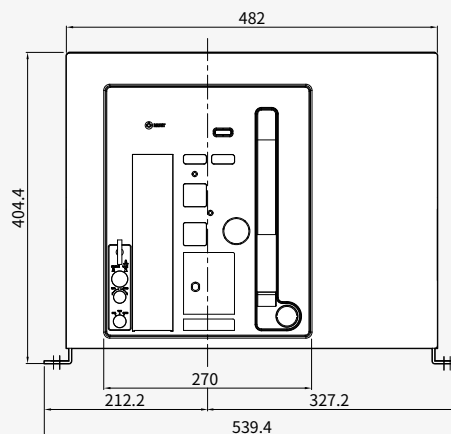
HGN Fixed Type 630 ~ 3,200 A HGN06 ~ 32 Q Frame

Front

Unit : mm

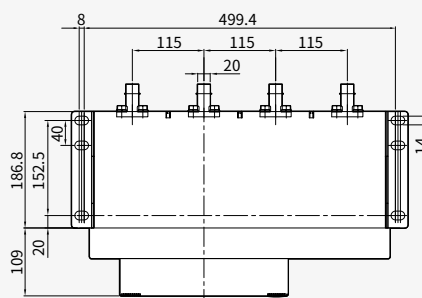
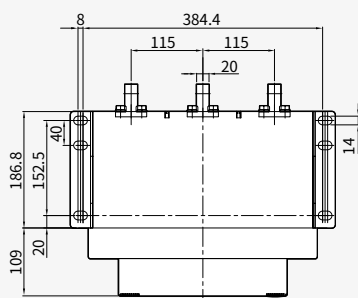


3P

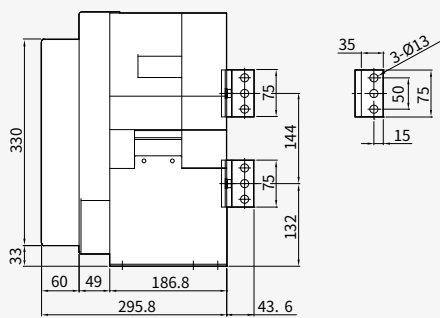


4P

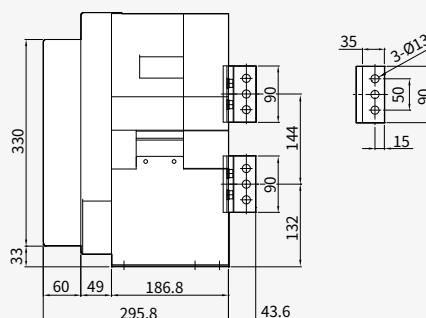
Vertical Type



[630 ~ 2,500 A]



[3,200 A]



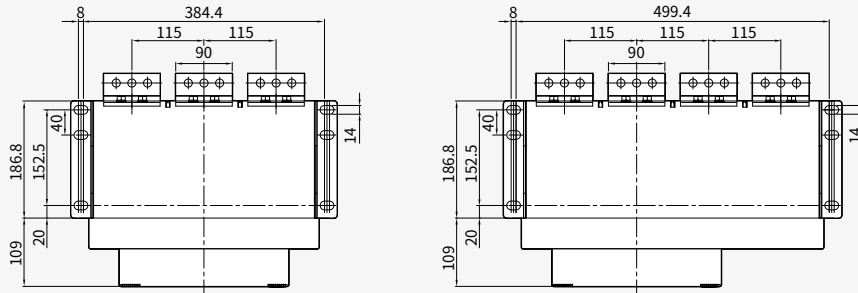
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Dimensions

HGN Fixed Type 630 ~ 3,200 A HGN06 ~ 32 Q Frame

Horizontal Type

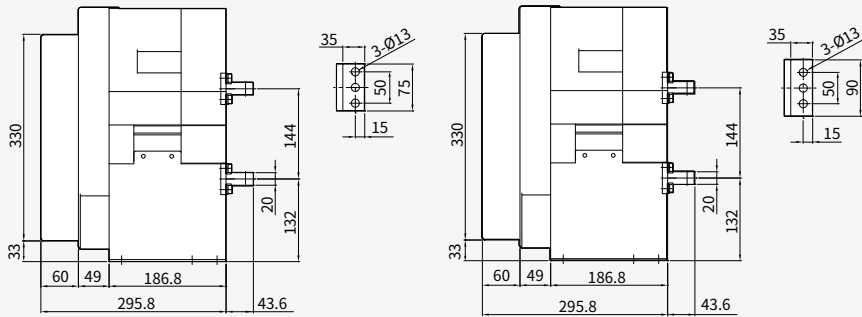
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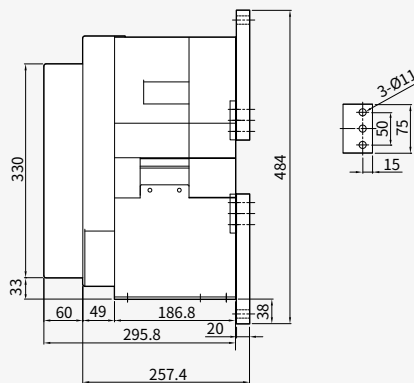
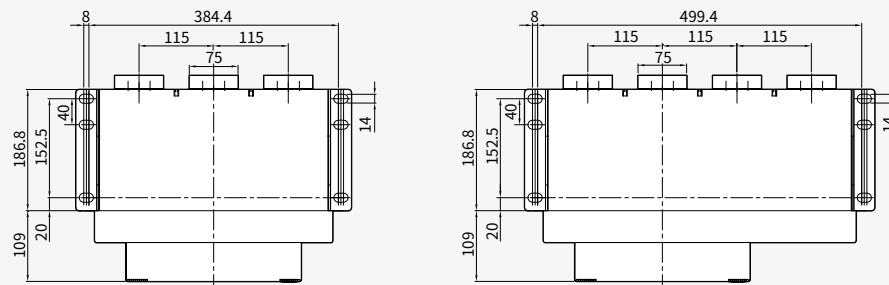
Model Name	Detail "A"
HGN06 ~ 25	75
HGN32	90

[2,000 ~ 2,500 A]

[3,200 A]



Front Type

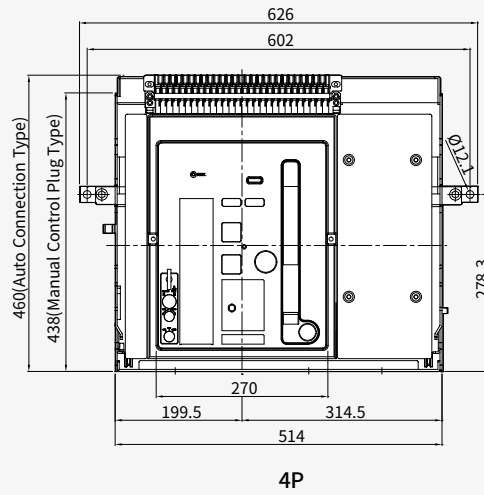
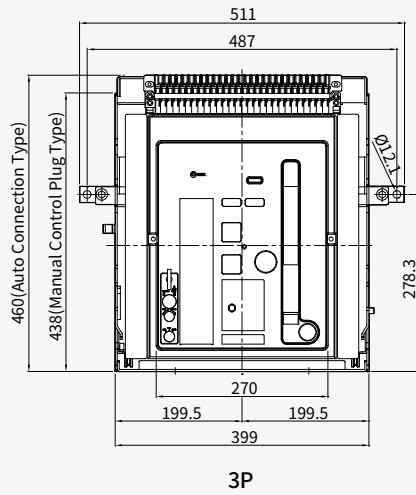


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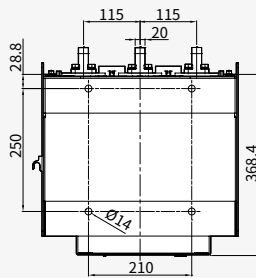
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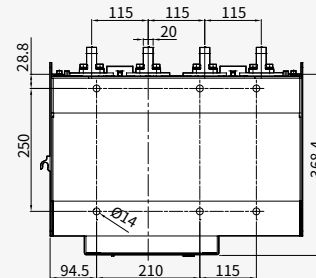
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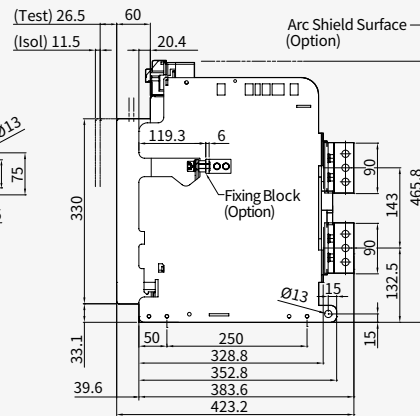
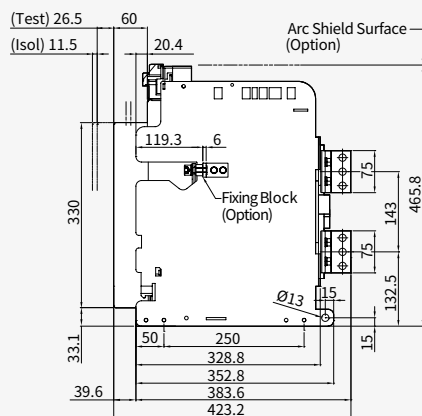
Vertical Type



[630 ~ 2,500 A]



[3,200 A]



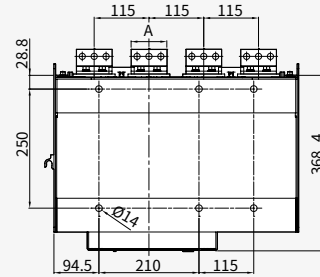
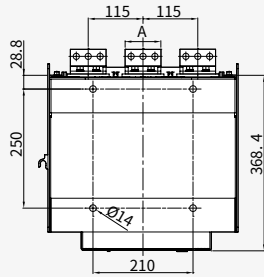
Dimensions

HGN Draw-Out Type 630 ~ 3,200 A HGN06 ~ 32 Q Frame

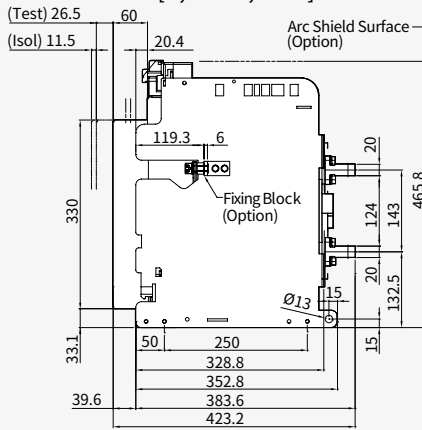
Horizontal Type

Unit : mm

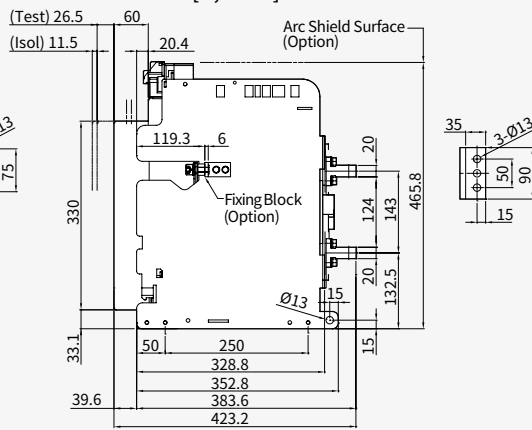
Model Name	Detail "A"
HGN06 ~ 25	75
HGN32	90



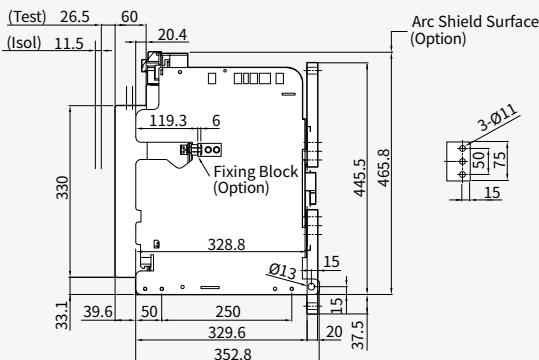
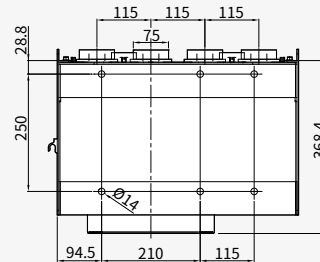
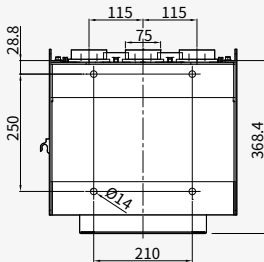
[2,000 ~ 2,500 A]



[3,200 A]



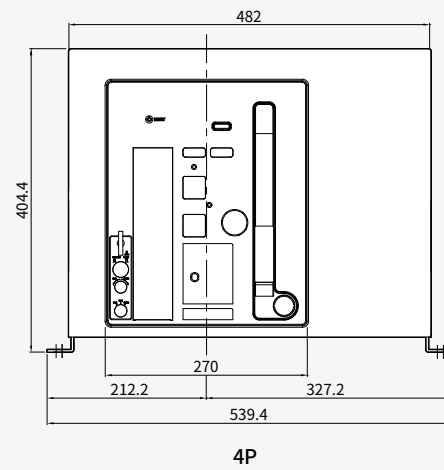
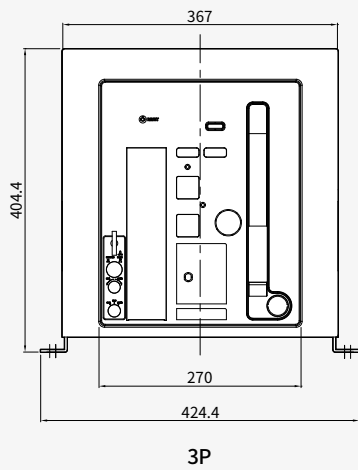
Front Type



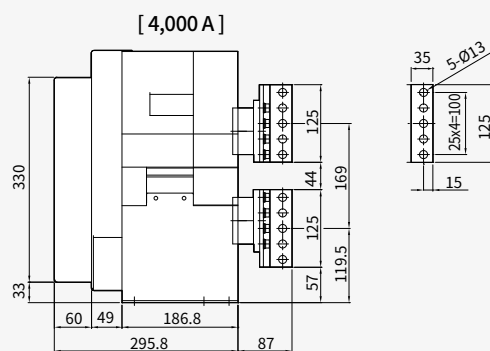
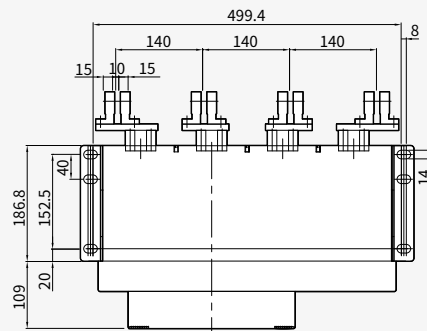
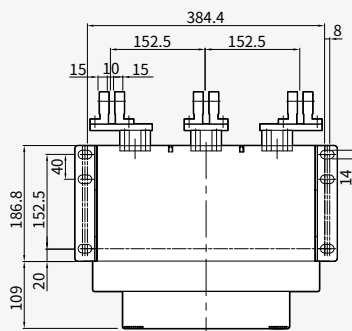
HGN Fixed Type 4,000 A HGN40 Q Frame

Front

Unit : mm



Vertical Type



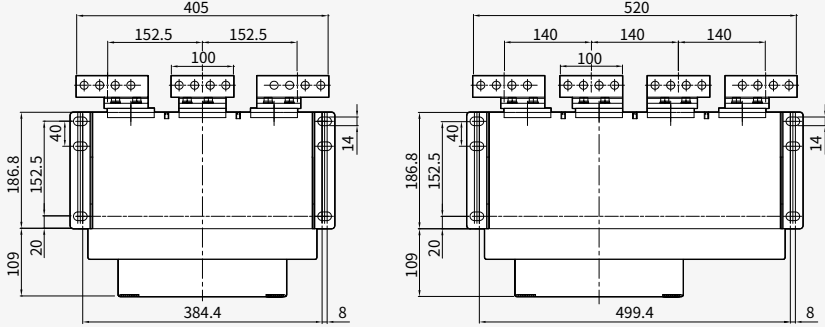
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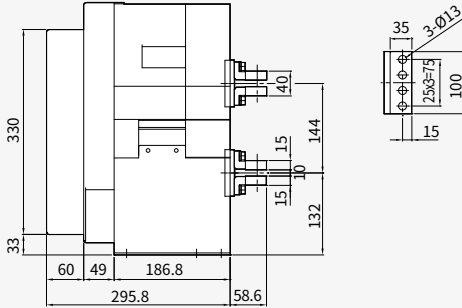
HGN Fixed Type 4,000 A HGN40 Q Frame

Horizontal Type

Unit : mm



[4,000 A]

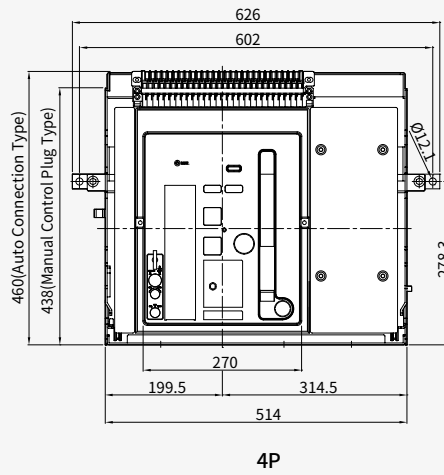
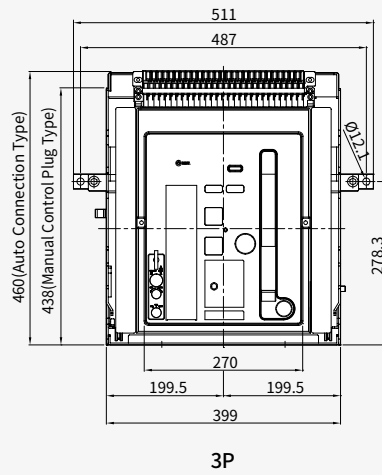


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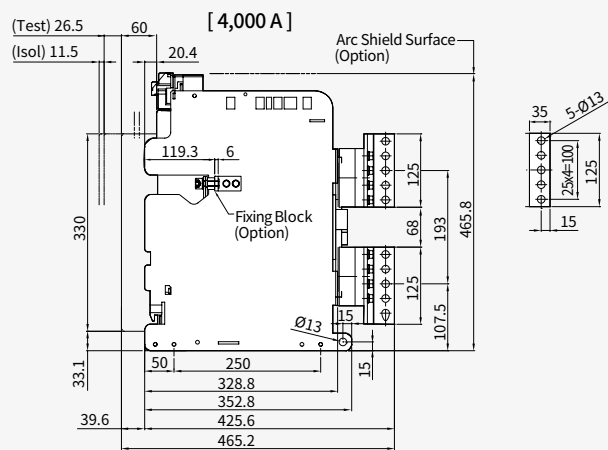
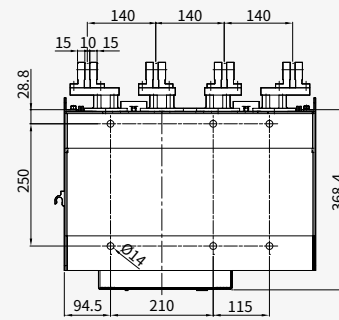
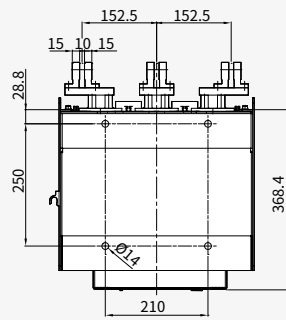
HGN Draw-Out Type 4,000 A HGN40 Q Frame

Front

Unit : mm



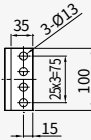
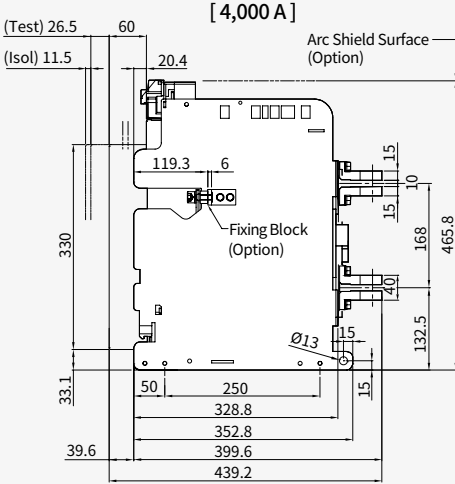
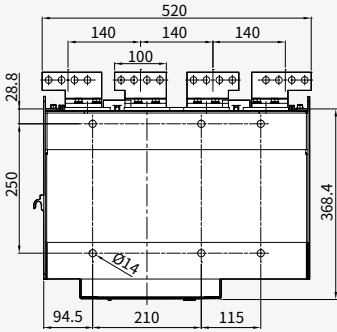
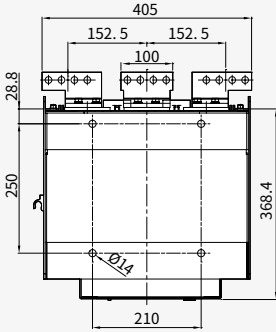
Vertical Type



Dimensions

HGN Draw-Out Type 4,000 A HGN40 Q Frame

Horizontal Type



※ The drawing dimension of this page may be subject to change without prior notice.

Order Code

HGN Type

HGN		12		P		3		J		M2	
Model Name		Rated Frame		Frame Category & Neutral Pole		No. of Poles		Mounting Method		Charging Motor Power	
HGN	Air Circuit Breakers	6	630 A	P	630 ~ 2,000 AF 3/4P Standard RST (N)	3	3 Pole	Independent Release of Draw-Out Type (Control Power) of Main Unit		M0	Manual Type
		8	800 A			4	4 Pole	A	Auto Connection	M1	AC/DC 110 V
10	1,000 A	J	Manual Connection			M2	AC/DC 220 V				
12	1,250 A	Fixed Type (Terminal Form)				M7	DC 24 V				
16	1,600 A	H	Horizontal Type			M8	DC 48 V				
20	2,000 A ¹⁾	V	Vertical Type			M9	DC 125 V				
6	630 A	Q	630 ~ 4,000 AF 3/4P Standard RST (N)	T	Upper Side: Horizontal/ Lower Side: Vertical	Draw-Out Type (Combined with Cradle)					
8	800 A			L	Upper Side: Vertical/ Lower Side: Horizontal	B	Auto Connection + Horizontal Type				
10	1,000 A			P ²⁾	Front Type and Mounting Type Selected by Customer	C	Auto Connection + Vertical Type				
12	1,250 A			D	Auto Connection + Upper Side: Horizontal / Lower Side: Vertical	E	Auto Connection + Upper Side: Vertical / Lower Side: Horizontal				
16	1,600 A			G ²⁾	Auto Connection + Front Type/Mounting Type Selected by Customer	K	Manual Connection + Horizontal Type				
20	2,000 A			M	Manual Connection + Vertical Type	N	Manual Connection + Upper: Horizontal / Lower: Vertical				
25	2,500 A			Q	Manual Connection + Upper Side: Vertical / Lower Side: Horizontal	R ²⁾	Manual Connection + Front Type/Mounting Type Selected by Customer				
32	3,200 A										
40	4,000 A										

※ 1) A frame, 2,000 A is only available for vertical terminal bus bar arrangement.

2) P, G, R type of fixed terminal bus bar arrangement should be ordered per terminal and mounted personally. (Refer to the additional components). Applicable frames are A06 ~ 16, B06 ~ 32.

3) CT for Over-Current

- A Frame : 200 ~ 2,000 A
- B Frame : 400 ~ 4,000 A

4) When applying OCR high-end type P, H type, place an order for voltage module (HGNSVM) additionally for mounting.

Order Code

When Placing an Order for the Cradle

DHN		12		P		3		A		H		AE	
Model Name		Rated Frame		Frame Category & Neutral Pole		No. of Poles		Control Terminal Connection		Terminal Bus Bar Arrangement		Accessories	
DHN	Air Circuit Breakers Cradle	16	DHN06 ~ 16A	P	630 ~ 1,600 A 3/4P Standard RSTN Reverse Phase NRST	3	3 Pole	A	Auto Connection	H	Horizontal Type	AE	Safety Shutter
		20	DHN20A ¹⁾				4		4 Pole		V		
		25	DHN06 ~ 25B	Q	630 ~ 4,000 A 3/4P Standard RSTN Reverse Phase NRST			J	Manual Connection	T	Upper Side : Horizontal/ Lower Side : Vertical		
		32	DHN32B								L		
	40	DHN40B							p ²⁾	Front Type and Mounting Type Selected by Customer			

※ AE : Safety shutter lock is supplied with safety shutter.

※ 1) A frame, 2,000 A is only available for vertical terminal bus bar arrangement.

2) P type of fixed terminal bus bar arrangement should be ordered per terminal and mounted personally. (Refer to the additional components).
Applicable frames are A06 ~ 16, B06 ~ 32.

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